endothelial growth factor (VEGF) and SHH in the ISV of patients with varicocele.
**Materials and Methods:** The study specimens were 1 cm of internal spermatic vein (ISV) obtained from 20 patients during left varicocele repair. The control samples of 1 cm ISV were obtained from 8 male patients who underwent left inguinal herniorrhaphy. We analyzed for VEGF and SHH protein expression by immunoblotting, immunohistochemical (IHC) staining, double immunofluorescent staining and confocal laser scanning microscopy. The data were analyzed using the Student's *t* test.
**Results:** Higher expression of VEGF and SHH proteins in varicocele veins than in the control group (P<.05) which located over muscle layers and endothelium were demonstrated by IHC staining. Both proteins co-localizated predominantly in endothelium of diseased veins under confocal laser scanning microscopy.
**Conclusion:** This is the first reporting the SHH expression in varicocele veins of humans. Our findings revealed the higher expression of SHH and VEGF in muscle layer and endothelium of varicocele veins than in control group. Both proteins co-localized predominantly in the endothelium of these diseased veins.

## *Pediatrics*

**PD2-5:**

### COMPARISONS OF THE EFFICACY AND SAFETY BETWEEN ROBOTIC VERSUS OPEN PEDIATRIC PYELOPLASTY: A SYSTEMIC REVIEW AND META-ANALYSIS

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**Purpose:** To systemically reviewed reported studies that compared the efficacy and safety of robotic (RP) versus open pyeloplasty (OP) in children with ureteropelvic junction obstruction (UPJO)
**Materials and Methods:** A systemic search of PubMED® was performed to search all randomized controlled trials or comparative studies that compared the surgical results of robotic versus open pyeloplasty in children with ureteropelvic junction obstruction. The two authors (HC Hsu and SJ Chang) independently did literature search, quality assessment, and data extraction. The obtained data were analyzed with Cochrane Collaboration Review Manager (RevMan®, version 5.3). The endpoints of the analysis and review included age, operative time, complications and success rate.
**Results:** In total, 6 comparative trials and 3 studies using national database met the inclusion criteria which comprised 17420 (RP:OP = 1599:15821) patients in our meta-analysis. Most studies reported median value of patient age, operative time and hospital stay. The pooled analysis revealed that RP were more frequently performed in older children, required longer operative time. Most studies reported that RP was associated with less estimated blood loss, less usage of analgesic agents while meta-analysis is not possible due to variability in reporting data. There was a significant higher complication rate in the RP group (RR = 1.29, 95 CI 1.10-1.51) while the post-operative success rate was comparable (RR = 0.99, 95 CI 0.94-1.04). RP is associated with significant higher costs when compared with RP (WMD, 95CI:).
**Conclusion:** Robotic assisted pyeloplasty is a promising alternative minimal invasive surgery for UPJO with comparable success rate when compared to gold standard open pyeloplasty. However, the complication rate is higher in the RP group which may be due to surgeons were in their early learning phases and the instrument were not pediatric oriented.

## *Other*

**PD2-6:**

### A DESCRIPTIVE STUDY OF INPATIENT CONSULTATION TO UROLOGY

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**Purpose:** Inpatient consultation for urological care is rarely analyzed in previous literatures. This study aims to perform a descriptive study of the intrahospital consultation to a urology service.
**Materials and Methods:** The study retrospectively evaluated all referrals to a single urologist within a 48 months interval (from 2009 to 2013) in a medical center. All consultation processes were completed within 24 hours. Comprehensive data including patient sex, age, consultation causes and subsequent treatments were recorded then analyzed.
**Results:** 780 inpatient consultations were analyzed. The mean age of all referrals was 66.15 ± 16.96 years and most of them were older than 60 years old (64.1%). 66.09% of these patients were referred from internal medicine department. The most common causes of consultation were acute urine retention (AUR), hydronephrosis, and lower urinary tract symptoms (LUTS), counting for 15.5%, 14.1% and 14.0%, respectively. 50.3% of the patients received definite treatments. There was no statistical significance of consultation numbers in different months.
**Conclusion:** LUTS (10.2%) and hydronephrosis (23.8%) represent the most two common causes of male and female patient referral to urology. As processing to old-age society, more urological facilities would be applied to LUTS/benign prostatic enlargement and hydronephrosis related diseases. Further studies is needed to improve the quality of urological service when dealing with interdepartmental consultation.

## *Podium-3*
## *Urolithiasis*

**PD3-1:**

### RECURRENT UPJ OBSTRUCTION CAUSED BY STONE FORMATION ON THE SUTURE MATERIAL AFTER OPEN PYELOPLASTY, A CASE REPORT

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**Purpose:** Non-absorbable sutures may act as a nidus for stone formation within the urinary system is a well-known condition. However, the non-absorbable material will still sometimes be applied into the urinary system and resulted in stone formation. We present a case that non-absorbable suture was used in a dismembered pyeloplasty 7 years earlier, and became a nidus for nephrolithiasis.
**Case report:** The case is a 55-year-old female with history of hypertension. She had left UPJ obstruction which underwent surgical management (no formal documentation was found) when she was 25 years old, and with recurrence which underwent laser endo-pyelotomy when she was 48 years old. The second procedure encountered perforation of the collecting system with active bleeding, and therefore emergent open conversion was carried out to ligate the bleeding vessels and to perform dismembered pyeloplasty. She experienced intermittent left flank pain after the second surgery. This time, she visited our hospital due to progressive left flank discomfort with fullness sensation for 2 months. Initial renal sonography revealed severe left hydronephrosis with renal stones. Intravenous urography showed left renal stones and severe left hydronephrosis with delayed left nephrogram. Tc-99m DTPA renal scan revealed partial obstruction in the left collecting system with impaired left renal function. We chose to assess this patient with diagnostic ureterorenoscopy (URS) to evaluate the UPJ condition, and with percutaneous nephrolithotomy (PCNL) to manage the renal stones. An 8Fr. percutaneous nephrostomy tube was inserted prior to the surgical procedure.
During the surgery, the ureterorenoscopy went upward to UPJ, where mild narrowing of the lumen and severe tortuosity were found. We passed the guidewire upward, and confirmed the position with antegrade pyelography (AP). The AP also showed that one of the renal stone was impacted over the UPJ, just above the tip of the URS. We placed one double-J stent, and changed the patient's position for PCNL. After creating access tract to the kidney, we identified the double-J stent and also the stone over the UVJ. During performing lithotripsy for the UVJ stone, we identified one light blue suture material that protruded from the UVJ and was embedded by the stone. We inserted the scissor to cut and remove the visible material, and use Holmium laser cauterization for the surrounding mucosal tissue. The post-operative condition was stable, and the patient was discharged few days later.